



## Abstract of CN1332380

The present invention relates to the method of measuring the conductivity and dielectric constant in different depth around a well in petroleum exploration. The method features that Lambert W function is used to find the propagation coefficient of electromagnetic field and further obtain the stratum conductivity. When MAXT emitting coils and MAXR receiving coils are included, the stratum conductivity, may be found out based on some formula accurately without the effect of skin effect. In case of high emitted frequency, the stratum dielectric constant can be obtained accurately in the same time. The electronic circuit can be installed in the well for read out directly.